

Claims

What is Claimed is:

1. A two-component concentrate suitable for the preparation of cathodic
electrodeposition coating compositions, said concentrate comprising, in
combination:
 - a) a binder component comprising an aqueous dispersion of a cathodic
electrodeposition binder having groups comprising active hydrogen,
said groups being cross-linkable with a blocked polyisocyanate; and
 - b) a cross-linking component comprising an anhydrous, organic solution
of an oxime-blocked isocyanate-functional adduct of an aromatic
polyisocyanate and at least one compound comprising at least one
group capable of addition towards isocyanate and at least one tertiary
amino group.
2. The concentrate of claim 1, wherein the cathodic electrodeposition binder is
selected from the group consisting of amino(meth)acrylic resins,
aminopolyurethane resins, amino group containing polybutadiene resins,
epoxy resin-carbon dioxide-amine reaction products and aminoepoxy resins.
3. The concentrate of claim 1, wherein the cathodic electrodeposition binder
carries tertiary amino groups and optionally amino groups selected from the
group consisting of primary amino groups, secondary amino groups, and
combinations thereof and wherein the amino groups correspond to a total
amine value of 20 to 150 mg KOH/g.
4. The concentrate of claim 1, wherein the cathodic electrodeposition binder has
an active hydrogen value of 50 to 300 mg KOH/g.
5. The concentrate of claim 1, wherein the cathodic electrodeposition binder has
a hydroxyl value of 50 to 250 mg KOH/g.

6. The concentrate of claim 1, wherein the aromatic polyisocyanate is selected from the group consisting of diphenylmethane diisocyanate, polyisocyanates derived from diphenylmethane diisocyanate and combinations thereof.
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7. The concentrate of claim 1, wherein the compounds comprising a group capable of addition towards isocyanate and at least one tertiary amino group are selected from the group consisting of aminoalcohols, polyamines and combinations thereof.
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8. The concentrate of claim 1, wherein the oxime-blocked isocyanate-functional adduct has a content of isocyanate groups blocked with oxime of 8 to 20 wt-%, calculated as NCO, and an amine value of 10 to 50 mg KOH/g.
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9. The concentrate of any claim 1, wherein the cross-linking component is neutralised with acid.
10. The concentrate of claim 1, wherein the cross-linking component is an anhydrous organic solution having a solids content of 50 to 90 wt-%.
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11. The concentrate of claim 1, wherein the cross-linking component is present as a solution in at least one organic solvent having a solubility in water of less than 250g/l water at 20°C.
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12. The concentrate of claim 1, further comprising at least one additive selected from the group consisting of pigments, fillers, and additives conventionally used in cathodic electrodeposition coating compositions.
13. The concentrate of claim 12, wherein the at least one additive is present in the concentrate as a component separate from the binder component and separate from the cross-linking component.
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14. A cathodic electrodeposition coating composition comprising a mixture of the two-components of the concentrate of claim 1.

15. The cathodic electrodeposition coating composition of claim 14, wherein the ratio of binder component to cross-linking component is 60 to 90 solids parts by weight binder to 40 to 10 solids parts by weight cross-linking component.
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16. Process for compensating the solids of a cathodic electrodeposition coating baths, comprising the step of adding the components of the concentrate of claim 1 to the bath as refill material.